



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Railroad Administration**

#### **Proposed Agency Information Collection Activities; Comment Request**

**[Docket Number FRA 2016-0002-N-22]**

**AGENCY:** Federal Railroad Administration (FRA), U.S. Department of Transportation (DOT).

**ACTION:** Notice and request for comments.

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**SUMMARY:** Under the Paperwork Reduction Act of 1995 (PRA) and its implementing regulations, FRA seeks the Office of Management and Budget's (OMB) approval of the proposed information collection activities abstracted below. However, before submitting this proposed information collection request (ICR) to OMB for clearance, FRA is soliciting public comment on specific aspects of the activities identified below.

**DATES:** Comments must be received no later than [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** Submit written comments on any or all of the information activities described in this notice by mail to either Ms. Rachel Grice , Engineering Psychologist or Michael Jones, Engineering Psychologist Office of Railroad Policy and Development, Human Factors Division, RPD-34, FRA, 1200 New Jersey Avenue, SE, Mail Stop 20, Washington, DC 20590; or Ms. Kimberly Toone, Information Collection Clearance Officer, Office of Information Technology, RAD-20, FRA, 1200 New Jersey Avenue, SE, Mail Stop 35, Washington, DC 20590. Commenters requesting that FRA

acknowledge receipt of their respective comments must include a self-addressed stamped postcard stating, “Comments on OMB Control Number 2130-New,” and should also include the title of the collection of information. Alternatively, comments may be faxed to (202) 493-6172 or (202) 493-6630, or emailed to Rachel.Grice@dot.gov, Michael.Jones@dot.gov, or Kim.Toone@dot.gov. Please refer to the assigned OMB control number in any correspondence submitted. FRA will summarize comments received in response to this notice in a subsequent notice and include them in its information collection submission to OMB for approval.

**FOR FURTHER INFORMATION CONTACT:** Ms. Rachel Grice at (202) 493-8005, or Mr. Michael Jones at 202-493-6106 or Ms. Kimberly Toone, at (202) 493-6132.

These telephone numbers are not toll-free.

**SUPPLEMENTARY INFORMATION:** The PRA, 44 U.S.C. 3501–3520, and its implementing regulations, 5 CFR part 1320, Rulemaking Procedures, require Federal agencies to provide 60 days’ notice to the public for comment on information collection activities before seeking OMB approval. See 44 U.S.C. 3506(c)(2)(A); 5 CFR 1320.8(d)(1), 1320.10(e)(1), and 1320.12(a). Specifically, FRA invites interested respondents to comment on the following summary of proposed information collection activities regarding: (1) whether the information collection activities are necessary for FRA to properly execute its functions, including whether the activities will have practical utility; (2) the accuracy of FRA’s estimates of the burden of the information collection activities, including the validity of the methodology and assumptions used to determine the estimates; (3) ways FRA can enhance the quality, utility, and clarity of the information being collected; and (4) ways FRA can minimize the burden of information

collection activities on the public by automated, electronic, mechanical, or other technological collection techniques or other forms of information technology (e.g., permitting electronic submission of responses). See 44 U.S.C. 3506(c)(2)(A); 5 CFR 1320.8(d)(1).

FRA believes soliciting public comment will promote its efforts to reduce the administrative and paperwork burdens associated with the collection of information Federal regulations mandate, including: (1) reducing reporting burdens; (2) organizing information collection requirements in a “user friendly” format to improve the use of such information; and (3) accurately assessing the resources expended to retrieve and produce information requested. See 44 U.S.C. 3501.

Below is a brief summary of the proposed ICR that FRA will submit for OMB approval as required under the PRA:

Title: Cab Technology Integration Lab (CTIL) Head-up Display Survey

OMB Control Number: 2130-New

Abstract: FRA is proposing a study which will focus on railroad engineer performance. Distraction is a common problem in locomotive cabs and preliminary research suggests that the dispatch radio may have significant effects on crew workload and performance. Anecdotal evidence from four train engineers indicates that the radio is the most distracting technology in the cab. There are generally two categories of dispatcher-engineer communications. Some require immediate action and should be provided in the usual manner (over the radio). However, others do not require immediate action and could be provided as a written message.

FRA seeks to develop an understanding of how the dispatch radio communications could potentially lead to human-performance degradation in the railroad engineer, and if a Head-Up Display (HUD) would be an alternative and superior technology to communicating information usually conveyed over the dispatch radio.

HUDs have been incorporated and researched extensively in aviation and motor vehicle applications because of their relative advantage over head-down displays (HDDs). Research in the Cab Technology Integration Lab (CTIL), FRA's locomotive simulator at the Volpe Center in Cambridge, MA, has shown that in-cab displays, such as moving maps, can lead to prolonged heads-down time (Young, et al., 2015). Additionally, research done in the field in naturalistic studies using passenger vehicles has also shown that looking inside a vehicle for interface control features increases the risk of an accident (Liang, Lee, & Yekhsatyan, 2012). Thus, a HUD has real advantages over an HDD. An investigation of alternative technologies that increase forward-track viewing time is worth pursuing.

To test the hypothesis that display communications on a HUD can reduce workload and distractions while increasing the time the engineer keeps his or her eyes on the forward track, an experiment will be run in the CTIL with four different conditions: HUD presence (present or absent) will be crossed with radio communications (present or absent). Forty train engineers will participate in the simulator study and survey data collection. The HUD will be developed and installed by the Massachusetts Institute of Technology.

A subjective measure of workload, such as the NASA TLX, will be utilized in this study and provided to the train engineers after the simulator experiment. In addition,

usability of the system will be rated with a usability scale by the train engineers.

Analysis of the simulator data, workload data, and usability survey data will allow FRA to assess whether the HUD has a relative advantage over the HDD in rail, and if it could mitigate performance declines related to the radio communications.

Affected Public: Railroad Workers

Respondent Universe: 40 Railroad Engineers

Frequency of Submission: On occasion

Reporting Burden:

Form Number	Respondent Universe	Total Annual Responses	Average Time per Response	Total Annual Burden Hours
Form FRA F 6180.168 – Simulator Survey	40 Engineers	40 surveys	6.5 hours	260 hours

Total Responses: 40

Estimated Total Annual Burden: 260 hours

Type of Request: Approval of a new information collection

Status: Regular Review

Under 44 U.S.C. 3507(a) and 5 CFR 1320.5(b) and 1320.8(b)(3)(vi), FRA informs all interested parties that FRA may not conduct or sponsor, and a respondent is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

**Authority:** 44 U.S.C. 3501–3520.

Issued in Washington, DC, on October 26, 2016.

Patrick Warren,  
Acting Executive Director.

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